

LOUISIANA
Conservationist

September/October 1988

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LOUISIANA WATERFOWL hunters have certainly "taken their lumps" this year. The article, "Duck Hunting Curtailed...", in this issue of your *Conservationist*, details reductions in season lengths, shooting hours and bag limits for the 1988-89 season.

Many of you are also aware that Louisiana has received quite a lot of severe criticism, some deserved and some quite unfounded, concerning illegal and wasteful actions by some waterfowl hunters in the past.

I am not going to spend my time nor yours in a debate over what has happened in years gone by. I want, instead, to tell you what the Department of Wildlife and Fisheries is doing and will do to remedy the problems we have had and to move Louisiana into a position of leadership in the battle to protect, preserve and restore our rapidly diminishing waterfowl populations.

Louisiana is in an enviable position as a waterfowl state. I say "enviable" because much of the criticism leveled at us stems from envy. The wetland habitat available to waterfowl here is unmatched by any state. We attract tremendous concentrations of ducks from both the Mississippi and Central Flyways.

That fact provides both unequaled hunting opportunity and unequaled temptation to disregard the waterfowl regulations. At the same time, Louisiana hunters see such concentrations of ducks that some do not believe that duck populations are really at dangerously low levels.

All this is complicated by the sheer expanse of Louisiana wetlands. Proper enforcement is an awesome

task in terms of both logistics and manpower.

We are addressing that problem in several ways. I have delegated responsibility for our enforcement activities to Deputy Secretary Kell McInnis who has implemented a new accountability system for handling and tracking the prosecution of citations.

Our officers have been assured of firm support from the department in their enforcement efforts. There are no "protected" or "VIP" hunts in Louisiana and we will pursue vigorous, uniform enforcement of our laws.

And, we are developing improved communications and cooperative efforts with agents of the U.S. Fish and Wildlife Service.

At the same time, we cannot ignore the fact that many of our problems are ingrained, bred of long tradition and passed down through generations accustomed to a seemingly endless abundance of waterfowl. It is a problem of attitude and education.

We are now developing a long-range program of intensive conservation education to combat the harmful attitudes and misconceptions of the past. All of Louisiana's citizens, particularly our young people, must realize that our ducks and other wildlife resources are being seriously threatened at every turn by man's continuing encroachment.

Louisiana still enjoys an abundance of native waterfowl and fantastic concentrations of wintering migratory waterfowl. We still enjoy the greatest waterfowl hunting and waterfowl watching opportunities in the nation. If we are to preserve that bounty, all of us must stand together to right past wrongs and provide for the future.

I suggest two things: If you are a waterfowl hunter, consider carefully your own attitudes and the attitudes of your associates. Do not engage in illegal or unethical practices and do not tolerate such action by other hunters.

Whether you are a waterfowl hunter or not, make a trip to your local Post Office and buy a Federal Migratory Waterfowl Stamp. They are commonly known as "duck stamps," and the revenue generated through sales goes directly for wetlands habitat acquisition and improvement.



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LOUISIANA Conservationist

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- Back Cover** "Swamp at Daybreak" by Nancy Webb
- Center Poster** "Louisiana Squirrels" by Douglas Pratt, courtesy LSU Press.



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Duck Hunting Curtailed Sharply for 1988-89



By Maurice N. Cockerham

"... it is the sportsmen who will ultimately decide if our North American waterfowl will survive."

WATERFOWLERS IN LOUISIANA and throughout the nation are facing sharply curtailed hunting seasons and bag limits for 1988-89. The total effect of the restrictions on duck hunting and, ultimately, on the efforts to protect and restore ducks, remains unknown.

It is no secret at this point that the waterfowl populations of the entire North American continent are in serious trouble. There is consensus on the major cause of the declines in duck numbers. Improved agricultural methods and machinery, coupled with governmental agricultural policy, have led to unprecedented habitat destruction, both in the United States and in Canada. More and more of the continent's waterfowl breeding, nesting and reproduction areas have been "converted" from wetlands and pothole areas to farmland at a faster and faster rate. (See "The Duck Dilemma," *Louisiana Conservationist*, Sept/Oct '85)

Complicating the matter, several years of prolonged drought conditions have plagued the nesting areas. Proponents of severely restricted hunting regulations now point out that some of the prairie pot-hole areas held water last year but there were no ducks present, a condition which sometimes exists even during periods of high duck population numbers.

Others counter that argument with the fact that intensive agriculture has destroyed nesting and brooding cover around the prairie potholes, forcing the ducks to seek out other, less suitable areas with more acceptable cover and food.

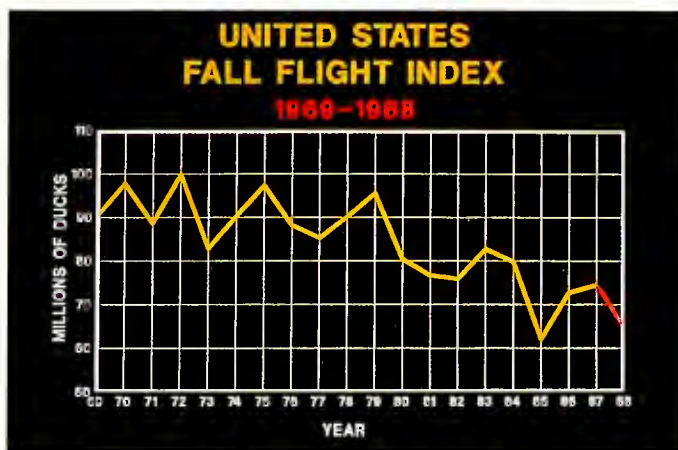
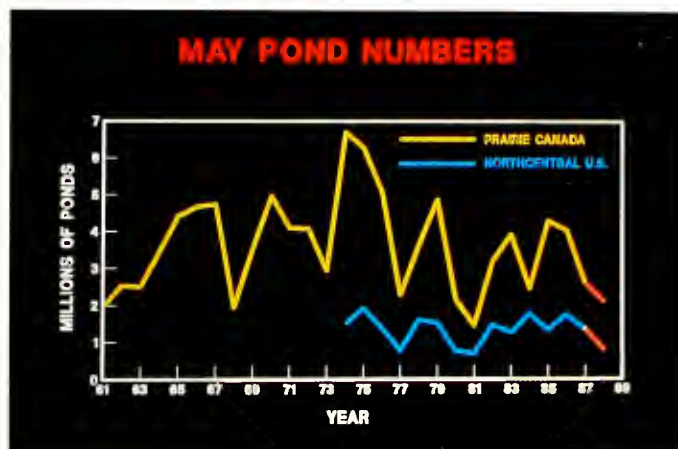
"The ducks don't nest in the water," they point out, "They have to have adequate upland areas in proximity to the water."

In essence, the ducks (and Nature) can deal with temporary drought conditions, but the permanent loss of wetlands and the equally important upland nesting cover inevitably means equally permanent declines in waterfowl numbers.

As biologists and other wildlife managers watched waterfowl numbers continue to decline to crisis levels, however, there was little doubt that duck hunters would face more restrictive regulations.

That anticipation was quickly fulfilled. Unfortunately, it came about in a manner that left resentment and rancor in its wake.

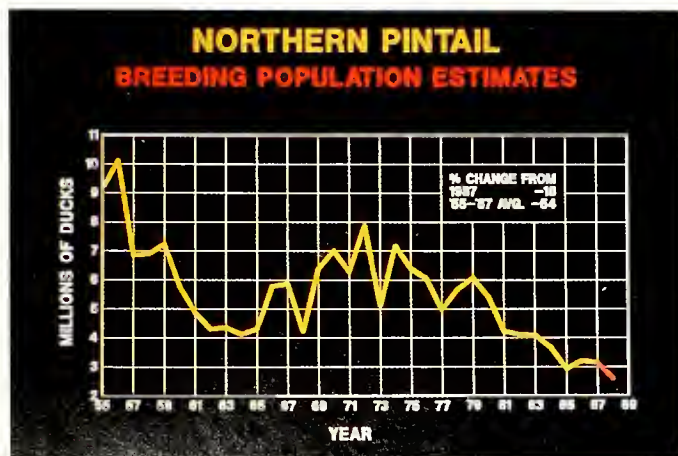
The U.S. Fish and Wildlife Service (FWS), which has supreme authority over migratory bird hunting regulations, has traditionally worked with and heeded the counsel of the various Flyway Councils, organizations composed of representatives of the fish and wildlife



Agricultural practices and extended drought have resulted in the second lowest predicted fall flight of ducks on record.



Pintail populations continued their downward spiral in 1988 and are covered by more restrictive regulations that regulate their take during the upcoming season.



agencies from the states within each major flyway. This year, however, the federal agency abandoned much of that tradition, leaving flyway councils and state agencies wondering what the future holds for the established regulatory process.

The Mississippi Flyway Council met in Baton Rouge during the last week in July. The Atlantic, Central and Pacific groups were also meeting at that time.

The U.S. Fish and Wildlife Service had announced, at a "status meeting" in Denver, Colorado, its goal of a twenty five percent reduction in season lengths, restrictions on the "framework" (The earliest and latest dates for waterfowl hunting, between which the states must set their seasons.) and further reductions in bag limits for selected species. After considerable debate and give-and-take on the parts of all concerned, the Mississippi Flyway group arrived at a compromise which was compatible with the final recommendations of the other flyway councils and which would produce a 25-35 percent reduction in the annual waterfowl harvest throughout the United States.

On August 2nd and 3rd, representatives of all four flyway councils met with the FWS Waterfowl Regulations Committee and biologists from the FWS Office of Migratory Bird Management in Washington. Following those discussions, there were no serious disagreements between the state and federal authorities. The state representatives left with what they believed was a firm package of regulations concerning permissible season lengths, legal shooting hours and bag limits which was acceptable to all parties and unlikely to change.

For Louisiana, that meant a severely tightened "point system" to determine bag limits and a significant reduction in total hunting days.

On August 4th, the Louisiana Wildlife and Fisheries Commission met in Baton Rouge and ratified the waterfowl seasons and bag limits for Louisiana. The word spread rapidly to the state's waterfowlers.

On the morning of August 5th, however, the phone rang in the Baton Rouge office of the Department of Wildlife and Fisheries. The Director of the U.S. Fish and Wildlife Service had "changed his mind." In an unprecedented move, FWS Director Frank Dunkle had mandated a complex conventional bag limit formula for all the states. The optional point system, which many biologists felt was actually more protective of several seriously depleted waterfowl species such as the pintail, was ruled out completely.

Although the state's previously announced season dates were acceptable, the federal mandate also altered the legal shooting hours.

Luckily, the Wildlife and Fisheries Commission was still in session in Baton Rouge. Implementing its emergency powers, the commission was forced to rescind its earlier action and ratify the federal ultimatum. Although the federal action would not become law until the end of the public comment period, the message was clear.

In the final analysis, Louisiana duck hunters will experience a far greater reduction in duck hunting opportunities than any other state in the nation.

At this point (early-Sept.), the Louisiana waterfowl hunting season shapes up as follows:

The East and West Zone boundary designations remain unchanged. Each zone will have a total season of thirty hunting days. That is a ten day reduction for the East Zone and a fifteen day reduction for the West Zone.

In the East Zone, the season will open on Saturday, November 19 and continue through Sunday, November 27. The second segment of the season will begin on December 19 and end on January 8, 1989.

The West Zone season also opens on Saturday, November 19 and runs through December 4. It reopens on December 26 and closes on January 8, 1989.

There will be no Early Teal Season in September and no Special Scaup Season in January.

SHOOTING HOURS FOR ALL MIGRATORY WATERFOWL WILL BE FROM LEGAL SUNRISE TO LEGAL SUNSET, rather than the traditional "thirty minutes before sunrise." In addition to seriously hampering wood duck hunting, this regulation is expected to present serious enforcement problems as it also applies to geese, coots, rails and gallinules. The delay in shooting hours was reportedly made "to aid hunters in correctly identifying ducks."

The federally mandated bag limit allows "...a maximum of three birds, of which not more than two may be mallards and not more than one may be a mallard female (hen), not more than one of which may be a black duck, not more than two of which may be wood ducks, not more than one of which may be a redhead and not more than one of which may be a pintail."

No canvasbacks may be taken at any time.

Mergansers are listed separately. The daily limit is five birds (in addition to the three bird regular limit), only one of which may be a hooded merganser.

Coots, rails and gallinules retain the separate bag limits of previous years.

Ducks not included in the above restrictions are subject to the three bird maximum limit in any combination and regardless of sex.

"Let's hope our duck hunters take the time to think this thing through carefully," says Robert Helm, Waterfowl Study Leader for the Department of Wildlife and Fisheries.

"Although the bag limit is confusing at first glance, particularly the pintail season, and the total hunting days are definitely reduced, there are some favorable points. For example, a hunter will be able to take, say, two mallard drakes and a wood duck. Combinations like that were not possible under the point system originally proposed for the '88-89 season.

"We're facing some tough times. There is no question that some meaningful governmental action is going to be required, both in the north-central United States and in Canada, to stop and reverse the problem of habitat

destruction. We know that plows and bulldozers are ultimately killing far more ducks than all the hunters out there.

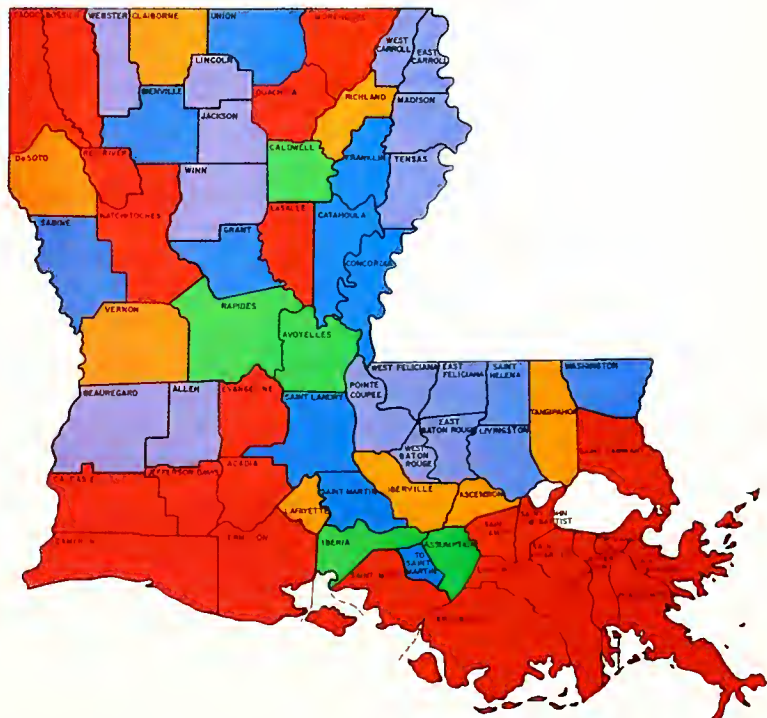
"Sportsmen have traditionally led the battle for conservation...for protection and restoration of our wildlife resources. No one else is going to step forward and provide the leadership and support to save the ducks. We have to do it. We have to continue our support...increase our support...and put the pressure on the Federal Government to raise the priority of wetlands restoration."

As a case in point, Helm pointed to repeated violations of the "Swampbusters Act" and the federal Conservation Reserve Program (CRP).

"Sure the drought hurt the farmers, but it has also been devastating to the ducks. Although farmers had already been paid to take land out of production, the government allowed them to violate the CRP and use set-aside lands for grazing and hay production. In

STEEL SHOT ZONES BY YEAR

- 1987-1988
- 1988-1989
- 1989-1990
- 1990-1991
- 1991 (Statewide)



Five more parishes (green above) are scheduled for mandatory steel shot for 1988-89 season.

the state of Minnesota alone, approximately 750,000 acres of nesting habitat were mowed during the peak nesting period of this year and an estimated HALF-A-MILLION DUCKS and other wildlife were lost because of that decision.

"You don't see a lot of sensational newspaper articles about that sort of thing, but when you add up that kind of loss in all the states and Canadian provinces you quickly see the real threat to duck populations. Priorities simply MUST be established to protect waterfowl."

The anticipated fall flight of ducks in the Mississippi Flyway is estimated to be twelve percent below the 1987-88 level, and in the Central Flyway the numbers are down by eighteen percent.

Nationally, the fall flight is expected to number about sixty-six million birds or less. The 1987 flight contained an estimated 74 million birds.

"You can't really judge the scope of the problem by what we see in Louisiana," Helm noted. "In fact, we may see lots of ducks this year. That's simply because much of the habitat in traditional stop-over areas has been wiped out by drought. The ducks will have to move farther south to find food and water."

A secondary but very real danger to efforts to restore waterfowl numbers is the loss of financial and political support from thousands of duck hunters who are "dropping out." In Louisiana alone, the numbers have decreased by twenty thousand hunters since 1985.

"The effort to restore the ducks, specifically the North American Waterfowl Management Plan (see 'Rescue or Requiem,' *La. Conservationist*, May/June '88), depends heavily on the continued support of hunters and landowners," Helm concluded. "When hunters drop out, they don't buy licenses or duck stamps and they don't lease wetlands. When landowners can't lease their wetlands they lose the incentive to preserve those vital areas. The challenge facing waterfowl managers is to reach a compromise that will maintain reasonable duck hunting opportunities while rebuilding habitat and breeding stocks."

"The 1980s in general, and 1988 specifically, have often been compared to the dust bowl years of the 1930s when similar drought conditions plagued the reproduction areas and depressed duck populations. Out of those 'dirty thirties' were born many conservation efforts to address those problems."

"Ducks Unlimited was organized in 1937, the federal Duck Stamp program was initiated in 1934 and regulations such as those prohibiting baiting and limiting shotguns to three shots were adopted in 1935."

"It is our hope that new, equally innovative and effective management methods will emerge to combat the problems of the 1980s."

"We get a lot of lip-service and advice from a lot of groups and individuals, but the bottom line is unchanged. Once again, it is the sportsmen who will ultimately decide if our North American waterfowl are to survive."



Creating a Private Refuge for Waterfowl:

Mrs. Verga Adams Mouton of Kaplan signs an agreement designating 640 acres of her private property as a waterfowl refuge to be administered as part of the national wildlife refuge system. Looking on are Virginia Van Sickle, secretary of the Louisiana Department of Wildlife and Fisheries, and Frank Dunkle, director of the U.S. Fish and Wildlife Service. It was the first such agreement signed by a Louisiana landowner in support of the North American Waterfowl Management Plan.



Anthony Clemens of Anacoco displays a striped bass weighing 38 pounds 4 ounces that he caught earlier this year. The big striper eclipses the previous Louisiana record for the species, a 37-pounder landed in 1983. Clemens' fish was 41.5 inches long and had a girth of 26 inches. He hooked it "in the Toledo Bend area," but wouldn't say exactly where. It was weighed by Robert C. Gough of the Louisiana Department of Wildlife and Fisheries.

By Joe Macaluso

Two witnesses are necessary at the weigh-in. One of them may be the person doing the weighing, and the other preferably a person who saw the fish caught.

Editor's Note: Joe Macaluso keeps track of record fish for the Louisiana Outdoor Writers Association. The group awards a certificate to fishermen who make a catch that places in the Top Ten in each category.

THE LOUISIANA Outdoor Writers Association maintains the official Louisiana Fish Records for 15 freshwater and 36 saltwater species and is now adding a flyfishing division which will include bass, bream and warmouth (goggle-eye) along with speckled trout and redfish.

The freshwater categories are hybrid bass, largemouth bass (caught by both rod-and-reel and flycasting rod), spotted bass, striped bass, white bass, bowfin (choupique), bream, buffalo, carp, catfish, crappie (sac-a-lait), chain pickerel, redbfin pickerel and warmouth (goggle-eye).

The saltwater categories are amberjack, barracuda, blackjack, bluefish, bonito, broadbill swordfish, cobia (lemonfish, ling), croaker, dolphin, drum, flounder, horse-eye jackfish, jack crevalle, king mackerel, Spanish mackerel, mako shark, blue marlin, white marlin, pompano, African pompano.

Also: rainbow runner, redfish, sailfish, sheepshead, cubera snapper, red snapper, spadefish, spearfish, tarpon, tripletail, speckled trout, white trout, blackfin tuna, bluefin tuna, yellowfin tuna and wahoo.

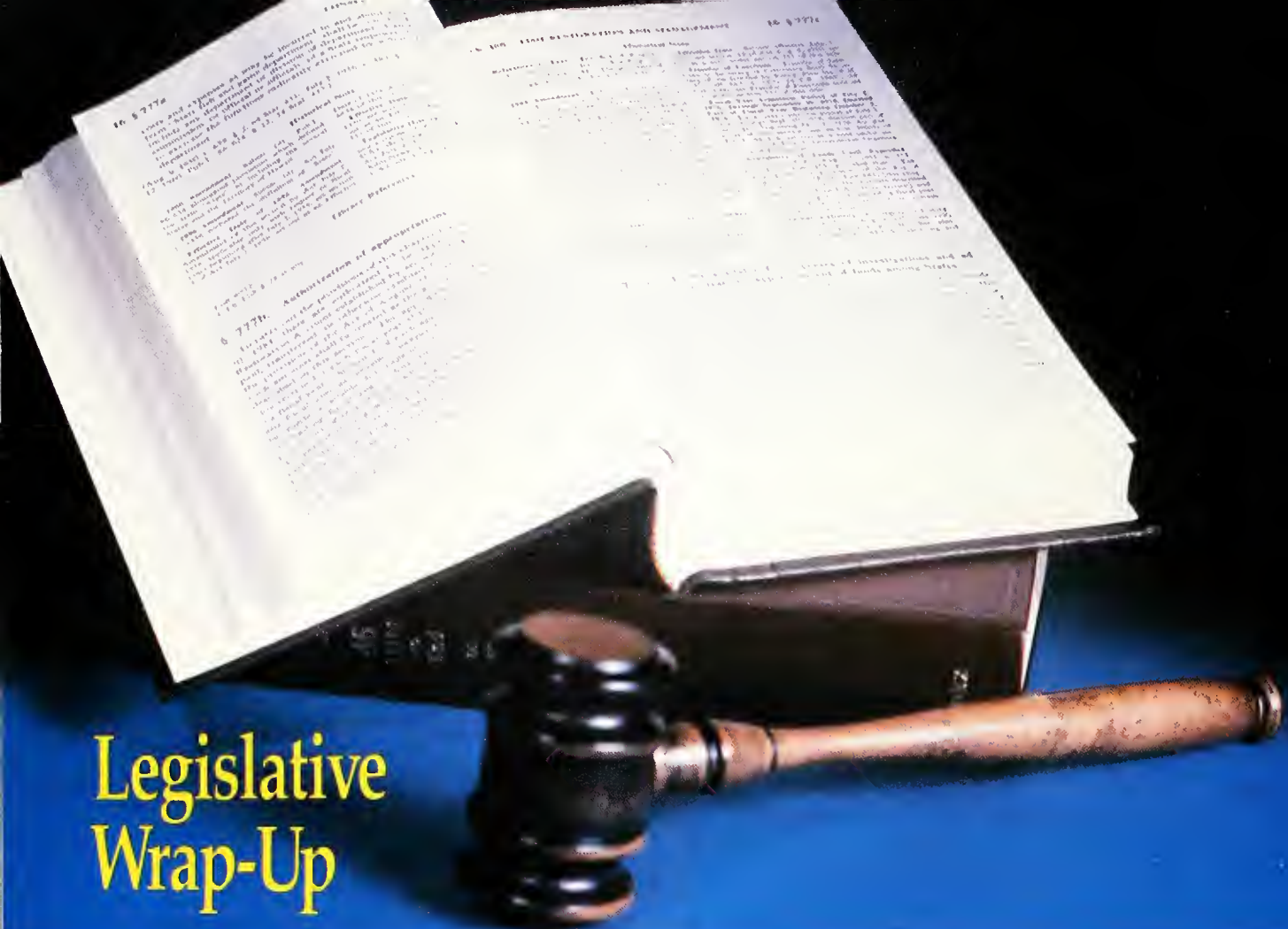
Fishermen who believe they may have caught a record fish should have it weighed as soon as possible before any shrinkage sets in. The fish must be weighed on a government-certified scale, such as that found in a meat market.

Two witnesses are necessary at the weigh-in. One of them may be the person doing the weighing, and the other preferably a person who saw the fish caught.

A photo of the fish should be taken. The species should be identified by a fish biologist, especially if the trophy is an African pompano, hybrid bass, spotted bass, white bass, king mackerel or Spanish mackerel. Biologists of the Louisiana Department of Wildlife and Fisheries are always happy to help.

All entries must have been taken in a sporting manner, and all entries are required to have been taken from Louisiana water or off the Louisiana coast.

For more information and/or applications for the Louisiana Fish Records, call Joe Macaluso, outdoor writer, Baton Rouge State-Times, 504/383-1111. Address letters to Joe Macaluso, Chairman, Louisiana Fish Records, Baton Rouge State-Times Sports Dept., P.O. Box 588, Baton Rouge, LA 70821.



Legislative Wrap-Up



By Kell McInnis, Deputy Secretary
and Maurice N. Cockerham

"Without doubt, the most highly publicized and most tumultuous...was the "Redfish Bill."

THE 1988 REGULAR SESSION of the Louisiana Legislature produced numerous bills with both direct and indirect effects upon the sportsmen of Louisiana, commercial fishermen and others utilizing the state's natural resources and upon the operations of the Department of Wildlife and Fisheries.

Without doubt, the most highly publicized and most tumultuous among those bills was the "Redfish Bill." There were about half-a-dozen separate bills introduced. They were debated, passed, killed, amended and re-debated throughout the session.

In the end, the "Redfish Bill" became law. It prohibits the commercial harvest of redfish in Louisiana waters for three years and severely limits the recreational catch.

The new daily limit for redfish (red drum) is five fish, not more than one of which may exceed twenty-seven inches in overall length and all of which must be more

than sixteen inches in overall length

The new law also imposes a 1.25 million-pounds-per-year quota on the commercial harvest of speckled trout (spotted sea trout), beginning on September 1 each year, and provides that commercial fishermen must use nets with larger mesh sizes once the speckled trout quota has been reached. The new law also specifies that no commercial vessel operating in Louisiana waters may have speckled trout on board after the annual quota has been reached, regardless of where the fish were actually taken.

The recreational limits for speckled trout are now completely separated from the redfish limits, providing for a daily catch of not more than twenty-five speckled trout with a minimum overall length of twelve inches.

Several other bills will impact commercial and recreational fishing in Louisiana. The Department of Wildlife and Fisheries was given full authority to establish, and to alter, the daily take and possession limits on all saltwater finfish other than speckled trout and redfish.

The definition of "finfish" was broadened to include species such as flounder.

The practice of "paratrawling" (using two or more boats to pull a net between or behind them) is now prohibited in canals that are public waters.

Butterfly nets (and trawls) may not be fished in such a manner as to obstruct the free passage of fish (i.e., bank-to-bank).

Only tuna, garfish, swordfish and sharks are excepted from a law requiring that saltwater finfish be kept intact, including both head and tail, until brought ashore. This law prohibits the practice of filleting at sea or removing heads and tails to avoid accurate measurement by Enforcement Agents.

The "unattended net" law was tightened to require the tagging of nets to identify owners, to allow private citizens to report "unattended nets" and initiate violation proceedings, and to allow the department to dispose of seized nets if they are unclaimed after thirty days.

The use of gill nets, trammel nets and seines by recreational fishermen (no commercial license and commercial gear tag) is now illegal. Only bait seines are excepted from this new law.

Finally, a new law directs Enforcement Agents to confiscate the entire catch of vessels caught shrimping during the closed season. If necessary, the entire vessel may be seized and taken to the nearest port for unloading.

One hotly debated issue was the introduction of exotic fish, specifically grass carp, into Louisiana waters.

Ultimately, laws were enacted to prohibit such introductions and/or transplanting. Under the new laws, live grass carp cannot be legally possessed in Louisiana. The new statutes reinforce the authority of the Department of Wildlife and Fisheries to regulate the introduction of exotic species and add rudd to the list of prohibited fish.

The department was, however, directed to work with a newly created task force to provide the legislature with a detailed report on the grass carp issue prior to the 1989 legislative session.

Louisiana hunters will also be affected by new laws, the most widely acclaimed being the "Civil Penalty Act." Under this measure, the Department of Wildlife and Fisheries is directed to establish a dollar value for each species of wildlife in Louisiana. The department will then file an action in civil court against convicted game law violators and recover the value of any illegally taken wildlife.

The new law was enthusiastically supported by the Louisiana District Attorneys Association, the Louisiana Wildlife Federation, the Gulf Coast Conservation Association and a multitude of individual sportsmen and sportsmen's organizations.

Funds recovered under the Civil Penalty Act will be dedicated to the Conservation Fund. At present, the department receives no part of fines and penalties levied against violators.

In other action affecting hunting, the legislature enacted a law prohibiting the release of ANY fowl, fish or animals of any kind, whether native to Louisiana or not, without the prior, written approval of the Department of Wildlife and Fisheries.

Another act prohibits hunting with a firearm equipped with any type of sight or device designed to enhance night vision. The bill eliminates the growing use of infra-red or "starlight" scopes on hunting firearms.

The legislature also mandated the introduction of a Louisiana Duck Stamp prior to the opening of the 1989-90 waterfowl hunting season. All waterfowl hunters sixteen years of age and older will be required to purchase the Louisiana stamps in addition to the federal waterfowl stamp. Funds generated by stamp sales will be earmarked for the acquisition and improvement of waterfowl habitat in Louisiana.

The legislature directed that, for the first three years, the stamp designs must be selected from a competition restricted to Louisiana artists.

Louisiana sportsmen were disappointed at the defeat of two measures designed to strengthen wildlife law enforcement. One would have provided for the seizure of any birds, fish or animals taken in violation of the law. The other would have empowered agents of the U.S. Fish and Wildlife Service to enforce Louisiana's game and fish laws as well as federal regulations.

And, finally, the legislature revised the state's Scenic and Natural Rivers System, which is administered by the Department of Wildlife and Fisheries.

The new law provides specific authority to regulate uses that adversely impact scenic rivers and streams, requires the development of a management plan for each stream in the system and requires a formal study and recommendation to the legislature prior to the inclusion or exclusion of any stream.

Take a Second Look

By Sara Ann Harris



For most any given place in the state, you can spot at least three types of tree squirrels. And, that doesn't account for gliders or ground dwellers, the other two general categories of the squirrel family.

GNAWING MAMMALS frequent your neighborhood. Their chisel-like incisors are large, strong and curved. Their massive and powerful masseter muscle is adapted for gnawing. They chew in a rotary motion. Sciurids. Commonly known as squirrels.

Everyone is familiar with squirrels. And there are good reasons for this. They are diurnal, that is, active during daylight hours and they are found everywhere in the state where there are wooded areas. That only excludes the coastal marshes.

Common. Yes, you say. Familiar. Yes, you add. But maybe not. A hunter or a naturalist in the woods with a pair of binoculars or anyone with an observant eye in their own backyard might be surprised at how many different squirrels there actually are in Louisiana. In fact, there are five races of tree squirrels in this state with color variations within some of those races. According to J.B. Kidd, assistant chief of the Game Division (LDWF), there is probably a wider variety of tree squirrels in Louisiana than in any other state in the country.

Squirrels fall under the scientific order of gnawing mammals or rodents. Close analysis has been given to their dentition, or the type, number and arrangement of teeth. In fact, species are distinguished from one another by dental formula, mathematical representations of the dentition. But you don't have to be close enough to see their grinding incisors to see the differences between Louisiana's tree squirrels.

Whether you are in the woods to hunt or hike, you have probably long been interested in identifying animals. There are basically only two species of Louisiana tree squirrels: the grey squirrel and the fox squirrel. The interesting twist is that there are two geographical races of the grey squirrel, i.e., two separate regions that each has its own grey squirrel, and three geographical races of the fox squirrel. That gives you a total of five races. Hold that. Now, there are also pronounced color variations within some of these races.

For most any given place in the state, you can spot at least three types of tree squirrels. And, that doesn't account for gliders or ground dwellers, the other two general categories of the squirrel family. In searching out and identifying tree squirrels in Louisiana keep the following in mind.

GREY SQUIRREL (*Sciurus carolinensis*)

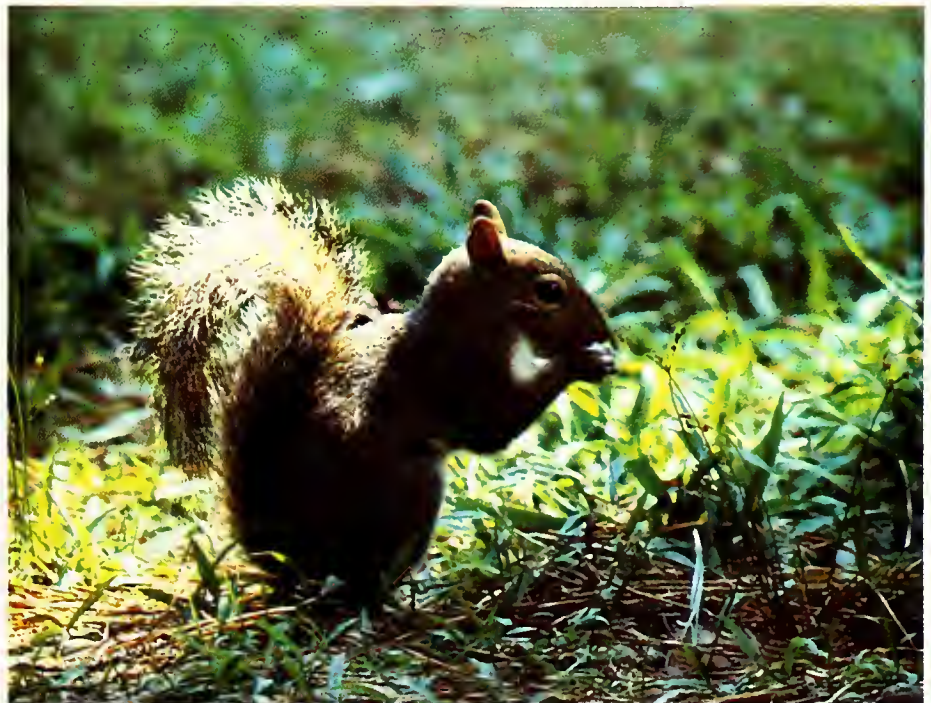
THE GREY SQUIRREL is the more diminutive of the two species and has, as you might expect, predominantly grey fur. Its grey tail is the identifying characteristic. Having a nervous disposition, the

grey squirrel does a lot of tail flicking and darting about. As noted by prominent Louisiana biologist George Lowery in *The Mammals of Louisiana and Its Adjacent Waters*, it is also the nosiest of the two: "The most common and characteristic sound is a loud and emphatic 'cherk, cherk, cherk,' repeated rapidly and followed by a heavy buzzing, often interpolated with a grunt and accompanied by vigorous wagging of the tail."

The southern grey squirrel (*S. c. carolinensis*), can be seen anywhere in the state. It is easily recognized by its white underside: throat, belly, paws and tail.

At the risk of confusing this whole issue and causing you to call your trip into the woods off altogether, let me add that there are four color variations of the southern grey squirrel. These are less common and are not illustrated here. But since you will be looking so closely now, there is a chance that you may sight one: albinos, blonds, erythrastics (decidedly red), melanistics (solid black and extremely rare in grey squirrels).

The bayou grey squirrel (*S. c. fuliginosus*), has a deep russet belly, the reddest underside in fact of all



The Squirrels of Louisiana



Delta Fox Squirrel, melanistic phase



Delta Fox Squirrel



Bayou Grey Squirrel



Southern Flying Squirrel



Eastern Chipmunk



Southern Grey Squirrel



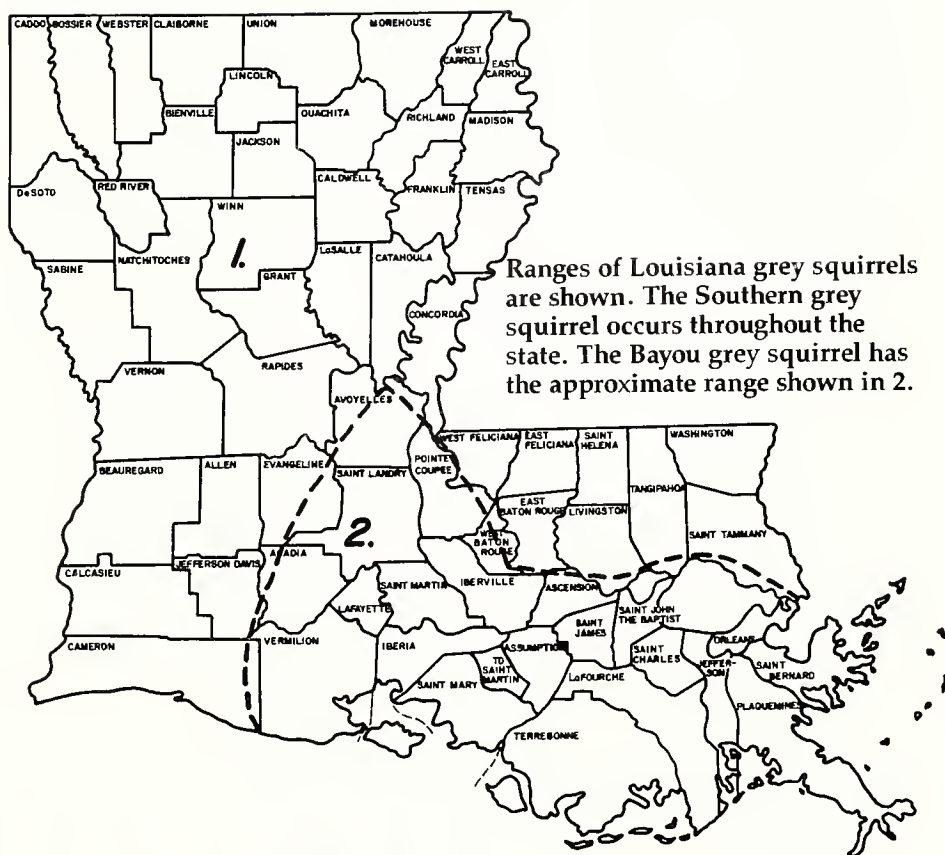
Chucklehead Fox Squirrel



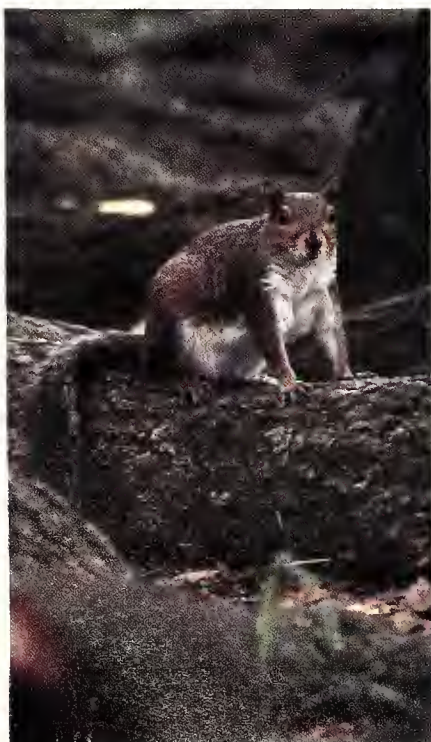
Bachman's Fox Squirrel, melanistic phase

Bachman's Fox Squirrel

PRATT
1972



Ranges of Louisiana grey squirrels are shown. The Southern grey squirrel occurs throughout the state. The Bayou grey squirrel has the approximate range shown in 2.



the tree squirrels, dark grey pelage, and again the grey tail. This subspecies ranges in the Atchafalaya and Mississippi river deltas and in the lower portions of the Florida parishes.

FOX SQUIRREL (*Sciurus niger*)

THE FOX SQUIRREL is generally the larger rodent. Like all squirrels it is scrupulously clean. It has a reddish cast to its coat. The bushy predominantly red tail is the identifying characteristic. Some report that this fatter animal is less gregarious. The delta fox squirrel, the chucklehead fox squirrel, and Bachman's fox squirrel are Louisiana's three distinct races.

The **delta fox squirrel** (*S. n. subauratus*), is a medium sized red squirrel. It occurs in the bottomland forests of the Mississippi, Tensas, Red and Atchafalaya river floodplains. Check overcup oak and bitter pecan particularly closely, as these are their favorites. There is a solid black variant. In *The Fox and Grey Squirrels of Louisi-*

ana J.B. Kidd points out that in some regions of the swamps the black delta fox squirrel is more common than the normal red variety.

The **chucklehead fox squirrel** (*S. n. ludovicianus*), can be identified by its very large head and yellow underside. This largest of Louisiana squirrels can weigh up to two and a half pounds. With the exception of the Red River basin, you can spot it throughout all of western Louisiana.

Bachman's fox squirrel (*S. n. bachmani*), is a large squirrel found in the Florida parishes. Its face is well marked always showing a patch of white on the nose, with varying amounts of white on the ears, toes and tip of the tail. Melanistic (black pigmented) individuals occur occasionally.

For all of the interesting differences you can find in the appearances of tree squirrels in Louisiana, you may have guessed that grey squirrels and fox squirrels have some commonalities. They compete for the same habitat, hardwoods, and mixed pine and hardwoods. Greys and foxes do not interbreed, but their reproduction cycles are similar and they both regenerate very quickly. Because they are diurnal, they are usually safe from any nocturnal predators. Human and hawk activities are their only threats.

Squirrels eat practically every kind of vegetable food that grows, whether beneath the soil or in the treetops. "In spring they eat buried nuts, acorns, the new buds of trees, beetles, other insects, tubers, bulbs, roots, eggs of birds, and seeds of spring-fruited trees. In summer they consume berries, fruits, nuts, corn, grains, and a wide variety of animal matter such as larvae, pupae, and adults of insects. In the fall and winter the supply of mast produced by oaks, beeches, magnolias, gums, dogwoods, hickories, pecans, and other trees of our forest is more than sufficient for squirrels and their competitors." (Lowery, 1974)

Squirrels' uses for their tails are ingenious. A flick is a sign of recognition at the approach of another squirrel. The tail is a "balance beam"

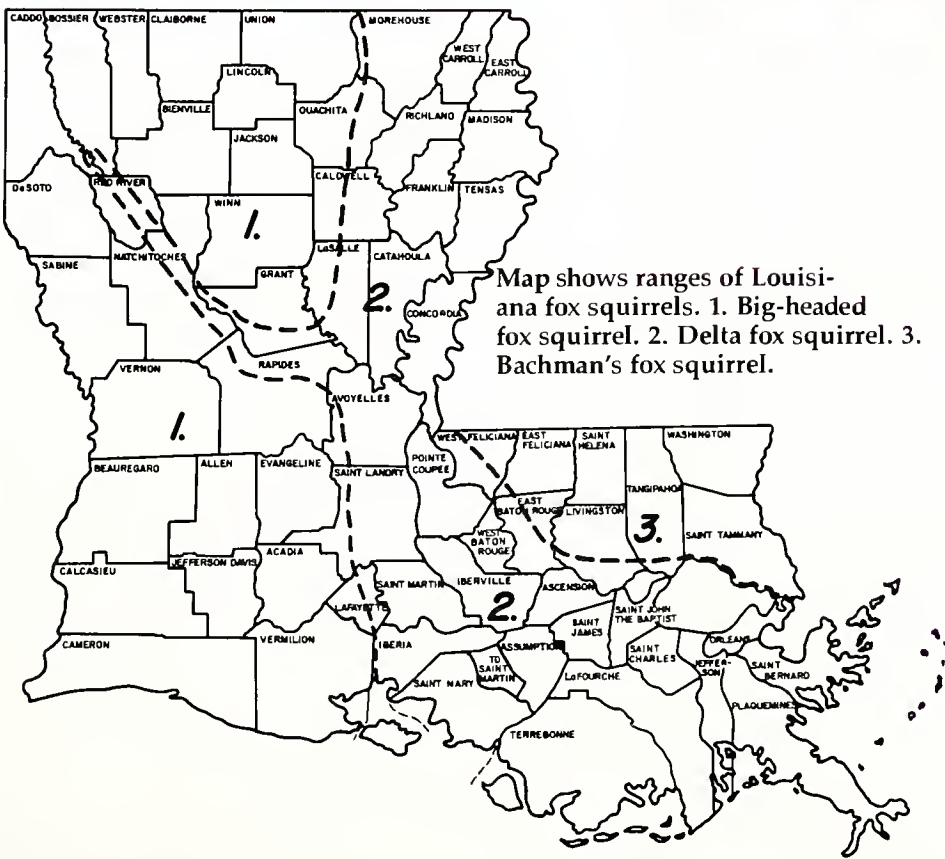
when they scamper from limb to limb. If a squirrel loses its footing and falls, the tail is used as a "parachute"—extended fully in order to slow down the drop. The squirrel's generic name *Sciurus* breaks down into two Greek words: skia meaning shadow and oura meaning tail, or the creature that sits in the shadow of its own tail. The scientist that named the squirrel must have made an observation similar to Lowery's: "I am often amused by the manner in which the tail is also used as an umbrella. Grey and fox squirrels sit on the feeders outside my home when it is raining heavily, but they bring the tail over the back with the hairs fluffed to shed the falling rain drops."

The squirrel family is divided into three categories: tree squirrels, ground dwellers and gliders. In addition to tree squirrels, Louisiana has a ground dweller in the Feliciana parishes, the eastern chipmunk, and a glider that ranges throughout the wooded areas of the state, the southern flying squirrel.

Humans are often quite taken by the amusing antics of the **eastern chipmunk** (*Tamias striatus*). This little creature, which resides in complex and extensive burrows, is attractively marked with two pairs of dark stripes down its back. It is noted for its rollicking mating chases, its vocalized "songs" and its habit of stuffing its cheeks with all sorts of morsels while foraging for food.

The **southern flying squirrel** (*Glaucomys volans*) nests in tree cavities and is infrequently seen because it sleeps during the day. It is equipped with what is known as a flying membrane, a furry flap of skin joining forelegs and hind legs. This squirrel doesn't really "fly," of course, but it does glide from tree to tree, its legs spread wide to extend the membrane and provide aerodynamic support. It does manage a graceful swoop as it lands at its destination.

May you have many hours of pleasure seeking out and identifying these gnawing mammals, not such common creatures afterall.



They Belong in the Wild

By Sara Ann Harris
Photography by
Guy LaBranche



"We have also admitted five bald eagles. There is no reason to shoot bald eagles. Bald eagles eat fish and usually "trash" fish or carrion, such as dead waterfowl."

Donna Dittmann
LSU Raptor Unit Coordinator

ALERT INTENT. TWO large eyes stare back at me. The russet eastern screech-owl perches comfortably on the handler's wrist. And it has a name, Rufous.

Rufous is one of the many raptors or birds of prey that have been brought to the LSU Raptor Rehabilitation Unit. Birds of prey are the finest hunters in the bird kingdom. As almost all raptors hunt by sight, it is no accident that Rufous's eyesight is incredibly keen. Generally, raptors can see seven to ten times better than people. Their eyes are nearly immovable in the sockets. Other adaptations for hunting include powerful toes, needle sharp talons and strong beaks. Superb hunters, still they pose no threat whatsoever to humans.

Birds of prey include two orders. *Falconiformes* are hawks and hawklike birds: vultures, kites, osprey, eagles, hawks and falcons. *Strigiformes* are owls. Curiously enough, the two orders are not closely related. Their similarities are the function of their parallel evolution as hunters. In Louisiana there are thirty-four species of raptors. Twenty-two of these are common depending on the region you are in and the season of the year.

The LSU Raptor Rehabilitation Unit was established at Louisiana State University School of Veterinary Medicine in August of 1982. The Louisiana Department of Wildlife and Fisheries (LDWF) has been its major source of support, in terms of funds for both start up and annual operation. Since the unit's inception hundreds of rehabilitated birds have been released back into the wild.



Injured, sick and orphaned birds of prey are admitted first to the Small Animal Clinic at the School of Veterinary Medicine Teaching Hospital where they are examined, diagnosed and treated. Under the close supervision of the unit director and Chief of Laboratory Animal Resources Dr. W. Sheldon Bivin, veterinary students have the opportunity to study these interesting wild animals. On completion of emergency veterinary care, the birds are transferred to the unit's outdoor flight cages and indoor holding pens. Unit coordinator and wildlife biologist Donna Dittmann, with assistance of two student chairmen, trains and oversees seventy-five students in the handling, feeding and rehabilitation of the birds. The unit also places unreleaseable birds with educational or scientific institutions and conducts research on raptor biology and medicine.

Rehabilitating birds of prey like Rufous and returning them to the wild is a great service, but as the administrators of the program are well aware rehabilitation treats the symptom and not the cause of the problem. The major cause for admittance is injury caused by gun shots.

As Dittmann explained, "Birds have hollow bones. Shot fragments can do terrible things to them. We can't put pins in them. You can't leave anything permanent in a bird's wing. If our arm were fractured we could just put a pin in it and it would be nearly as good as new. But birds' wings are finely engineered and they have to heal perfectly for a bird to fly again. It's hard to deal with these types of injuries.

"It is important to save raptors, but it's probably more important to have people learn not to shoot them. Because we can only patch up a certain percentage of the birds that come in it would be better to strengthen our education program and put ourselves out of the rehabilitation business."

"Nearly 100% of the hawks that come in have been shot," Dittmann adds. "We have also admitted five bald eagles. There is no reason to shoot bald eagles. Bald eagles eat fish and usually "trash" fish or carrion, such as dead waterfowl."

Some birds are unreleasable because a gunshot wound has resulted in loss of a wing. Dittmann and student helpers train these birds so that they can be useful in the education program that promotes the protection of birds still in the wild where they belong. With the assistance of vet students she has reached thousands of people over the past year speaking at environmental organization meetings, schools, festivals and zoos. The unit has recently added hunting clubs to its newsletter mailing list. The education effort is strengthened by the occasional news and feature spots produced by television stations. One noteworthy story was nationally broadcast by CBS.

The unit's education program provides people with accurate information about raptors. The emphasis is on (1) the fact that birds of prey present no threat in the least to the public and (2) they fill an important position in the natural scheme of things.

Birds of prey are not dangerous, Dittmann starts out. They normally avoid any contact with people.

Melissa Jeske examines barred owl, left, that suffered wing injury in collision with car. At bottom, Donna Dittmann, unit coordinator, works under the watchful eye of Rufus, an eastern screech owl who was brought to the rehab center irreversibly imprinted on people and is thus unreleasable.



Incidents of harassment are the result of people provoking a parent bird by disturbing a nest or handling the young. The unit gets quite a few Mississippi kites that have been shot. They nest in swamps near Baton Rouge and in large trees in residential neighborhoods. Such proximity with humans is a distinct disadvantage. Mississippi kites are innocuous. They feed on insects which they snag in flight. The equally harmless red-tailed hawk is a frequent visitor to the unit. They are the largest common hawk in Louisiana. They habitually perch on the top of telephone poles. Easy targets. Broad-winged hawks and red-shouldered hawks are also brought in fairly frequently. They feed on lizards and snakes.

Part of the problem lies in old the misconception by farmers that hawks are pests, that they will prey on domestic stock. Actually, Dittmann explains to listeners, very few hawks prey on anything other than song-birds, rodents and other small mammals, and insects. And control of the rodent population only serves the interest of the farmer. Cooper's hawks "will occasionally take chickens but for the most part if your chickens are near a coop or you have them under control, the Cooper's hawk is not going to approach. It's a case of many hawks and hawk-like birds taking a bad rap for a few problem birds."

She also emphasizes that in the wild these expert hunters play an important role and they appear anything but vulnerable. Merlins and peregrine falcons are referred to as true falcons. They are renowned for their speed. They hunt pigeons and ducks respectively, and song-birds. When falcons spy a meal they fold their wings and dive bomb it. They clamp their claws into a fist, bash the prey, then snatch it as it falls and break its neck with two special tooth-like projections on the side of the beak.

At the top of a food chain in which every animal is interdependent upon the other, raptors with their



hunting prowess provide a basic and necessary function to the ecological balance. This population control of different species serves human and wildlife needs.

A large number of birds are admitted for another reason altogether. Taken by the cuteness of young birds, well meaning individuals make pets out of the animals that they believe to be abandoned by their parents. The education program offers people sound information about young birds. The message again is that wild animals belong in the wild.

Rufous accompanies the educators. Its story is told. It was discovered in the Spring of 1987. The tree that housed its nest cavity had been downed. A family collected it and attempted to care for it for a few weeks before bringing it to the unit. Perfectly able and healthy, Rufous is more than likely capable of hunting in the wild.

The eastern screech-owl is the smallest of the owls in Louisiana. As the females among the birds of prey are in most cases larger than the males, it is surmised that Rufous is a female. But Rufous is nonreleasable because it has been imprinted.

For only a period during early development, birds will imprint or take on the identity of whoever/ whatever they see. It sounds comical when first hearing that Rufous believes that it is a person. But because it does not have a natural fear of people, in the woods it would not protect itself by avoiding people. On the contrary, in establishing its natural boundaries it is likely to attack a person whom it sees as one of its kind and competing for territory. During mating season it will actually court humans. The behavior of imprinted birds is unpredictable, so they are unadapted to the wild and dangerous in captivity. Imprinting is irreversible.

Unlike many people assume, parents *will* return to care for the young, even if they are covered with the human scent. "Just because a baby bird is on the ground and the parent does not seem to be around it

does not mean it is an orphan. Parents may be off collecting food.

"Most birds do not have a keen sense of smell. Even if the parents see you picking up a baby they probably won't abandon it," Dittmann explains. Only after the parents have not returned for two hours should a concerned citizen consider collecting the baby bird. It needs to be brought immediately to a rehabilitation unit.

Birds of prey taken from the wild as adults and not imprinted do not make acceptable pets, Dittmann adds. They have very specialized feeding and breeding habits that most people are unaware of. Improper diet can cause serious health problems. They are very likely to return to their wild ways making co-existence with people an uncomfortable arrangement at best. And, they are illegal to possess without a permit.

Through the education program reliable information is being distributed to clear up misconceptions and promote stewardship of Louisiana's striking birds of prey.

Raptors are protected by the Bald Eagle Protection Act, the Migratory Bird Treaty and the Endangered Species Act. There are heavy fines and prison terms contingent on the violation of these federal regulations. It is illegal to take them from wild, shoot them, possess them or a part of them, or transport them. Special permits can be applied for through the U.S. Fish and Wildlife Service for specific activities such as scientific collection. Louisiana state game and fish law stipulates similar strong prohibitions and penalties.

Given the economic climate in the state today, the LSU Raptor Rehabilitation Unit by necessity is developing new means of support. Beginning now the unit will have to rely heavily on private donations. To help continue these valuable rehabilitation and education programs anyone may make a donation by contacting **Donna Dittmann, LSU Raptor Rehabilitation Unit, South Stadium Road, Baton Rouge, Louisiana 70803. Phone number: (504) 388-3497.**

Also available is information on engaging a speaker on Louisiana raptors, safe techniques for collecting baby birds, training to assist in related rehabilitation efforts, the newsletter mailing list, and raptor T-shirt sales.



OTHER LICENSED WILDLIFE REHABILITATORS IN LOUISIANA

Wild Bird Rehabilitation Center
Jamie Primm, Coordinator
Audubon Park and Zoological Garden
P.O. Box 4327
New Orleans, LA 70178

Louisiana Nature and Science Center
Jennifer A. Outlaw, Coordinator
110000 Lake Forest Boulevard
New Orleans, LA 70127-2816

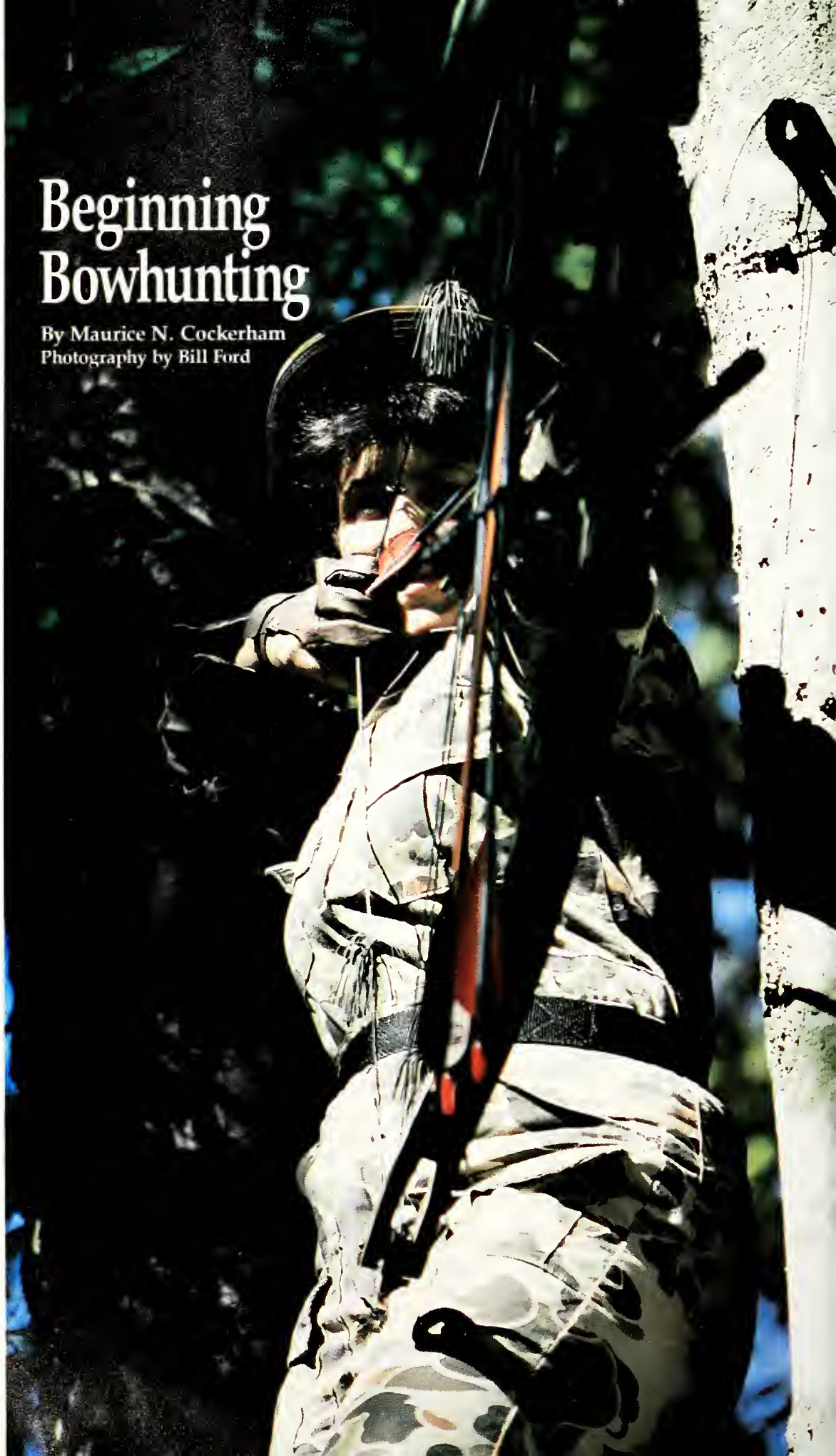
Wildlife in Distress, Inc.
Kathryn Diaz, Bird Coordinator
203 Camellia Blvd.
Lafayette, LA 70503

Helping Hands, Inc.
C.A. Rogillio, Coordinator
P.O. Box 73544
Metairie, LA 70895-3544

Lake Charles Animal Control
Laura Lanza, Director
P.O. Box 5550
Lake Charles, LA 70606

Beginning Bowhunting

By Maurice N. Cockerham
Photography by Bill Ford



"Hunting with a bow and arrow is a matter of attention to detail, detail, detail. Almost without fail, success or failure is determined by some trifle done or undone."

THERE WAS A SUDDEN jolt as a surge of adrenalin kicked all the young woman's senses into high gear. There was not a moment's doubt that the movement off to her right was a deer. Surprisingly, the dreaded "buck fever" symptoms did not come. Despite the electric anticipation, the young woman remained calm, all that she had been taught and told running through her mind in an orderly, if hurried, sequence.

As the deer moved closer, she realized that this would be a shot unless she made a mistake. The big, sleek doe was casually following a worn trail that would bring her well within range.

Range, in this case, meant twenty five yards. The lady in the tree stand held a hunting bow. Although a rifle hunter in the same stand would have had an effective range of almost a hundred yards, or as far as the hunter could see clearly, her modern compound bow gave her a shooting range about equal to throwing a rock. This was eyeball to eyeball hunting and she knew the slightest mistake would mean a flashing white tail on a rapidly disappearing deer.

Gina Lemoine is 26 years old, the mother of two young children and a new member of a growing legion of bowhunters in Louisiana.

There are two major reasons given by those who turn to the bow as a hunting tool. Many have been successful gun hunters and are looking for a renewed sense of challenge in their deer hunting. Most Bayou State bowhunters, however, continue to use rifles or shotguns during the legal gun seasons. They see archery as a means of extending their hunting opportunities.

The Louisiana deer season opens for bowhunters on October 1 and continues until January 20. That totals up to 112 days of hunting opportunity. The gun-only hunter, by comparison, faces a maximum season of 48 days.

Of course, those who choose to continue to hunt with the bow and arrow when the gun season is in progress are required to follow the same rules which apply to gun hunters. That means that bowhunters must, during those periods, wear the legal amount of blaze orange. It also means that, when the gun season is for antlered deer only, bowhunters must also restrict themselves to antlered deer.

Before, between or after the gun seasons, however, bowhunters can legally take either bucks or does. (Spotted fawns cannot be legally taken at any time by gun hunters or bowhunters.)

Legal equipment requirements are really quite simple. Bows must be of at least 30 pounds "draw weight."

Arrows must be equipped with well sharpened broadheads not less than 7/8 inch in width. Drugged arrows, explosive arrows and crossbows are no-nos. (Special crossbow permits are occasionally issued to amputees and others with specified medically-documented permanent disabilities.)

Bowhunters must also purchase a Louisiana Archery License in addition to the Basic Hunting License and the Louisiana Big Game License.

Legal requirements and licenses, however, are only a preliminary consideration in bowhunting. Those hoping to increase the challenge of the hunt will quickly find their wish fulfilled. Those merely seeking increased hunting opportunity will find themselves paddling a similar boat, like it or not.

In the first place, proficiency with the equipment is considerably more critical with the bow and arrow. There is most certainly a right and a wrong way to get started. The wrong way leads almost surely to disappointment, frustration and failure. Choose the right way. (See *Moving Over To The Bow, La. Conservationist*, Sept./Oct. 1987)

Once the proper equipment is in the aspiring bowhunter's hands, long hours of serious practice constitute an absolute necessity. A few evenings may turn a neophyte into a reasonably accurate rifleman. With the bow and arrow, there is no such thing as reasonably accurate. You are, or you aren't, accurate. Being accurate entails the ability and discipline to draw and shoot consistently into a three or four inch circle from various positions and to determine distances, not at ten yard increments but at one or two yard increments, from five to forty yards.



Hitting what you aim at is no accident.

Successful bowhunters are masters of camouflage (body and scent) and patience.



Finally, to borrow a movie line from Clint Eastwood, "A man has got to know his limitations." Some men and women can shoot with precision at thirty yards but fall apart at thirty-five or forty yards. It takes a heap of discipline to watch a nice buck saunter past at thirty five yards and resist the temptation to try a "Hail Mary" shot because you cannot be soundly confident of your ability at that range.

Only after the archer has mastered the arts of accuracy and range determination can he or she rightfully take up the trail toward the title of bowhunter. Excepting the random cases of blind luck, this is a title that must be earned.

The consistently successful bowhunter is a master of the art of camouflage (both body and scent) and absolutely motionless patience. At bowhunting distances, a white tail deer can detect the motion of a hunter's breathing or the odor of mouthwash, the flicker of an eyelid or the twitch of a facial muscle. The bowhunter learns quickly that deodorants, shave lotions, hair spray and scented soaps are taboo. The shine of a naked face or hand or the outline of a human form against a contrasting background spells instant failure.

First, however, the bowhunter must get close enough to his quarry. Doing so requires an understanding of deer and their behavior and an ability to "read sign" that would leave the average gun hunter with his mouth agape. Time must be spent afield in serious study. Experience must be heaped upon experience. Dues must be paid.

Hunting with a bow and arrow is a matter of attention to detail, detail, detail. Almost without fail, success or failure is determined by some trifle done or undone.

Gina Lemoine had paid her dues. In 1980, she had started working part-time at The Spillway Sportsman in Brusly, La. The place has a fully equipped bowhunting supply shop and is owned by Gina's brother-in-law, Stan Blouin and his partner Richard Dugas. Both are experienced and successful bowhunters. Both encouraged Gina to try archery.

With no hunting experience, Gina began shooting a bow and arrow "just for fun." Three years later, she began bowhunting.

"I saw a lot of deer," she relates, "but it just seemed like I was always in the wrong tree. They were all out of range. It was inexperience. I had a lot to learn. I tended to really get ecstatic each time I saw a deer... real buck fever... but I loved it and I wasn't about to give up."

Her first hunt of the 1987-88 bow season came on October 10. A minor cold front had just passed. She was hunting private land in West Feliciana Parish.

"I was in my stand by three o'clock and saw my first deer about four-thirty, but it was out of range. About five forty-five, I caught movement to my right and the doe came out. It was browsing along a trail that led right by my stand and I just KNEW this would be my chance ... if I didn't blow it. Strangely, I didn't get the shakes at all.

"It took the doe almost fifteen minutes to get into a good position. I stood up when it passed behind a small tree and then drew my bow when it had its head behind a little sapling...really just a twig. Then I had to hold my draw for about thirty seconds till it was slightly past my stand.

"I couldn't believe how calm I was! I picked my spot, just like Richard and Stan had taught me, and concentrated on my aim and my release."

The triple-bladed broadhead struck precisely where she was aiming and passed completely through the doe, slicing into a lung and the liver. The doe hunched up, dropped her tail and raced away.

Thirty minutes later, Gina Lemoine climbed down and retrieved her arrow. It was bloodied. There was a good trail of pink, frothy blood. She knew she had made a clean, solid shot. She also knew that the real work was ahead of her.

It is unusual, even rare, for an arrowed animal to collapse immediately when shot. To lay claim to the title of "bowhunter," one must be able to competently track either a blood trail or a bloodless trail.

Gina impatiently wiled away an hour and then, joined by Stan and Richard, she set off after her trophy. It was a grueling, hands and knees job. The blood trail grew thin. Finally, darkness closed in. Reluctantly, the trio suspended proceedings until dawn the next day. Little did they know that the object of their quest was just yards ahead of them.

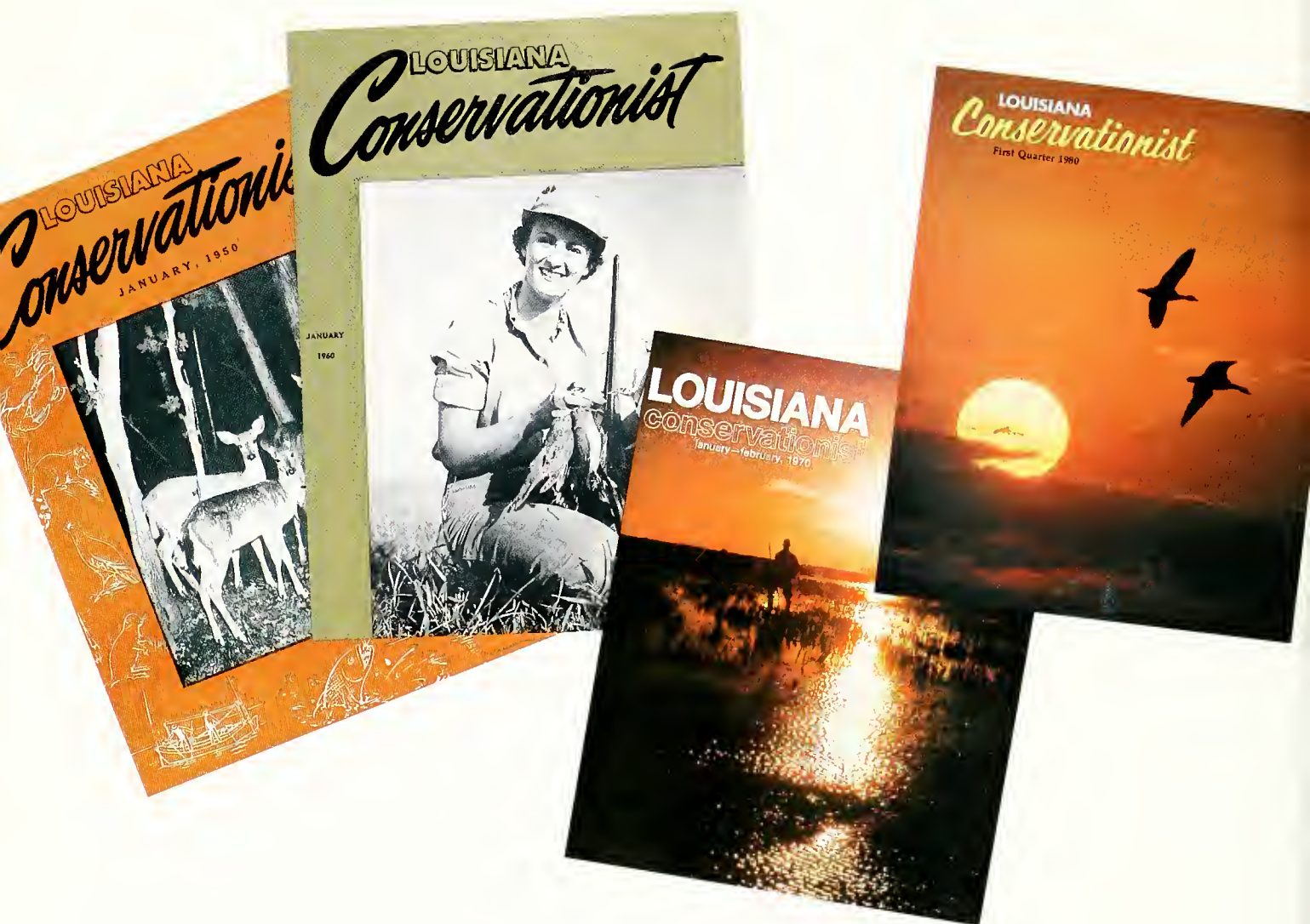
In this case, Gina's trophy lay in a creek bottom some three hundred and fifty yards from her stand. It was recovered just after daybreak the following morning.

"I love it!" she said. "It's really a fantastic sport and I just can't wait to go again!"

Gina Lemoine has paid her dues. She is a bowhunter.



The proof is in the pudding. Gina Lemoine displays proof that she's joined the ranks of Louisiana bowhunters.



Dependence and Accountability: Cornerstones for the Future

By Wade Byrd

Along with direct dependence on you, comes direct accountability to you, an accountability from which we both can benefit.

THIS LAST LEGISLATIVE session, we were faced with the choice of either making the *Louisiana Conservationist* self supporting or shutting it down. The choice was born of a precarious financial situation within the Department of Wildlife and Fisheries and a

prevailing mood in the Legislature that individuals benefiting from a state service should bear the cost of that service. (The complete financial situation of the department will be examined in detail in the next issue.)

Convinced the *Louisiana Conservationist* provides a justifiable educational service to the citizens of this state, both young and old, we chose to make it self supporting. What emerged was a plan that allows you, our subscribers, to decide the magazine's future.

Beginning January 1, 1989, the *Louisiana Conservationist* will become a paid-subscription, self-sustaining entity attached to the Louisiana Department of Wildlife and

Fisheries. An ancillary budget (separate from Wildlife and Fisheries) was created for the magazine by the Legislature. Monies generated by the magazine will be deposited into that fund and expenses incurred by the magazine will come from that fund.

Along with direct dependence on you, comes direct accountability to you, an accountability from which we both can benefit. For you, it will result in a bigger, better, and more responsive magazine. At the same time, it will provide us with added motivation and justification for giving you a bigger, better and more responsive magazine.

We are acutely aware that we will likely lose a substantial portion of our readership. The drop in readership in other states that have changed from free to paid subscription (Louisiana is one of the last states with a free state magazine) has been as high as 70 to 80 percent. We are going to do our best to keep that from happening in Louisiana. We will actively solicit and respond to your input. We will constantly seek to improve and expand the magazine. And, we will spend your money wisely and keep you abreast of how it is spent.

In order to keep you abreast of finances, we will include an annual fiscal report in the magazine. The following magazine costs for the last year of production do not include costs of staff, equipment, supplies, etc. In the past, no one has dedicated a majority of their time to the magazine. Instead, many people have contributed a small portion of their time to its production. Staff and supply costs therefore have been difficult to monitor. While some of that will, by necessity, continue in the future, there will be two staff positions (not an increase in present staff size, but rather a reassignment of duties) tied directly to production of the magazine and funded through the magazine ancillary budget.

EXPENSES FOR LAST SIX ISSUES (ONE YEAR)

	Printing	Postage	Typesetting & Design	# printed
Sept./Oct. 1987	\$54,195.35	\$18,611.54	\$2,756	232,027
Nov./Dec. 1987	\$49,584.52	\$18,519.84	\$2,756	235,922
Jan./Feb. 1988	\$60,318.19	\$18,595.24	\$2,756	232,251
March/April 1988	\$58,546.20	\$18,663.64	\$2,756	232,455
May/June 1988	\$59,438.82	\$20,064.46	\$2,756	232,458
July/August 1988	\$54,810.09	\$20,643.07	\$2,756	232,538
Totals	\$336,893.17	\$115,097.79	\$16,536	1,397,651
Total Cost \$468,526.96	Cost per copy \$0.34			

We are able to produce, print and mail the magazine for 34 cents per copy (exclusive of staffing costs) because of its large circulation. A majority of the costs of production and printing (typesetting, design, color separations, press startup, etc.) are the same no matter how many copies are printed. As the number of copies printed

increases, you are basically paying for additional paper and postage. Also, since we currently print more than a quarter million copies, large national printers bid on our contract. Their rates are consistently substantially lower than smaller printers.

At the lower circulation rate expected after the switch to paid circulation, per copy costs will skyrocket. Revenue and expense estimates have been compiled for a variety of circulation levels. Additionally, other sources of revenue, such as very limited top-quality advertising, are being considered as possible methods of making up any cash shortfalls. Should revenues exceed costs, excess funds will be applied to magazine expenses for coming years (postal and printing increases, etc.) and to providing the magazine to schools and libraries for educational purposes.

REVENUE AND PRODUCTION COST ESTIMATES

Revenue estimates are based on \$5.50 per subscriber per year, or \$0.92 per copy. One-year subscriptions are \$6.00 annually, two-year subscriptions are \$5.50 annually and four-year subscriptions are \$5.00 annually. \$5.50 is an average of the three. Estimated production costs do not include staffing and supply costs which are set for the current year at \$59,831.

Circulation	Annual Revenue	Annual Production Costs	Costs Per Copy	Annual Net
25,000	\$137,500	\$164,397	\$1.10	-\$26,897
50,000	\$275,000	\$246,597	\$0.82	\$28,403
75,000	\$412,000	\$328,794	\$0.73	\$83,706

Considering just the above subscription revenue and including staffing and supply costs (\$59,831 used for estimates), at 25,000 circulation we stand to lose \$86,728 annually, at 50,000 circulation the annual net loss drops to \$31,428, while at 75,000 circulation we will end up \$23,875 in the black.

On just subscription revenue, the break even point is somewhere between 50,000 and 75,000 subscribers. But, with limited high-quality advertising and/or other creative revenue producing measures, the magazine could be successfully operated at a much lower circulation rate.

At circulations above 75,000, we will be able to put a little money in the bank for rainy days and increase the utilization of the magazine in our in-school educational efforts.

All in all, we feel the combination of dependence and accountability that results from paid circulation offers the opportunity for a bright future for the *Louisiana Conservationist*. For our part, we offer a bigger, better and more responsive magazine. To make it happen, however, we need your input and support.



Reader Preference Survey

BELOW IS A CAREFULLY DESIGNED reader preference survey. Information learned from it will help guide us in producing the kind of magazine that you, our subscribers, want and deserve.

The survey is your opportunity to participate in editorial decision making. Please take a few minutes to complete it and return it with your subscription.

Thank you.

1. How long have you received *Louisiana Conservationist*?

- Less than 1 year ☐
 1-4 years ☐
 5-9 years ☐
 10-15 years ☐
 Over 15 years ☐

2. How do you rate the appearance of *Louisiana Conservationist*?

- Very attractive ☐
 Attractive ☐
 Unattractive ☐

3. How do you feel about the number of pictures in *Louisiana Conservationist*?

- Too many pictures ☐
 Not enough ☐
 Just right ☐

4. How do you feel about the length of the articles in *Louisiana Conservationist*?

- Articles are too long ☐
 Articles are too short ☐
 Articles are just right ☐

5. Do you find *Louisiana Conservationist* easy to read and understand?

- Always clear ☐
 Usually clear ☐
 Sometimes clear ☐

6. How often do you read picture captions in *Louisiana Conservationist*?

- Always ☐
 Usually ☐
 Seldom ☐
 Never ☐

7. How often do you read each department of *Louisiana Conservationist*?

- | | Always | Sometimes | Never |
|---|--------------------------|--------------------------|--------------------------|
| Features on: | | | |
| Hunting | ☐ | ☐ | ☐ |
| Fishing | ☐ | ☐ | ☐ |
| Nongame wildlife | ☐ | ☐ | ☐ |
| Environmental topics | ☐ | ☐ | ☐ |
| Game and fisheries management | ☐ | ☐ | ☐ |
| "How to" articles | ☐ | ☐ | ☐ |
| Outdoor recreation, boating, camping, etc. | ☐ | ☐ | ☐ |
| Indepth articles on specific animal species | ☐ | ☐ | ☐ |
| Conservation notes | ☐ | ☐ | ☐ |
| Bayou Kitchen | ☐ | ☐ | ☐ |
| Letters to Editor | ☐ | ☐ | ☐ |
| Secretary's comments | ☐ | ☐ | ☐ |
| Table of contents | ☐ | ☐ | ☐ |

8. How much interest do you have in each topic covered in *Louisiana Conservationist*?

- | | Very Interested | Interested | Not Interested |
|--------------------|--------------------------|--------------------------|--------------------------|
| Big game hunting | ☐ | ☐ | ☐ |
| Small game hunting | ☐ | ☐ | ☐ |

- | | | | |
|---------------------------------|--------------------------|--------------------------|--------------------------|
| Hunting safety | ☐ | ☐ | ☐ |
| Wildlife research & management | ☐ | ☐ | ☐ |
| Fishing | ☐ | ☐ | ☐ |
| Fisheries research & management | ☐ | ☐ | ☐ |
| Trapping | ☐ | ☐ | ☐ |
| Birdwatching | ☐ | ☐ | ☐ |
| Rivers and streams | ☐ | ☐ | ☐ |
| Recipes | ☐ | ☐ | ☐ |
| Law enforcement | ☐ | ☐ | ☐ |
| Boating and canoeing | ☐ | ☐ | ☐ |
| Shooting | ☐ | ☐ | ☐ |
| Camping and hiking | ☐ | ☐ | ☐ |
| Nongame wildlife | ☐ | ☐ | ☐ |
| Public recreation areas | ☐ | ☐ | ☐ |
| Endangered species | ☐ | ☐ | ☐ |
| Conservation controversies | ☐ | ☐ | ☐ |
| Environmental issues | ☐ | ☐ | ☐ |
| Nostalgia | ☐ | ☐ | ☐ |
| Humor | ☐ | ☐ | ☐ |
| Wildlife photography | ☐ | ☐ | ☐ |

9. How many people other than you read your copy of *Louisiana Conservationist*?

- | | | | |
|-------------|--------------------------|---------------|--------------------------|
| Just myself | ☐ | Three persons | ☐ |
| One person | ☐ | Four persons | ☐ |
| Two persons | ☐ | Five or more | ☐ |

10. How many school-aged children read your copy of *Louisiana Conservationist*?

- | | |
|----------------|--------------------------|
| One child | ☐ |
| Two children | ☐ |
| Three children | ☐ |
| Four children | ☐ |
| Five or more | ☐ |

11. Is your copy of *Louisiana Conservationist* delivered to your home or office?

- | | | | |
|---------------|--------------------------|--------|--------------------------|
| Home | ☐ | Office | ☐ |
| Home & office | ☐ | | |

12. How would you react to the introduction of limited advertising in *Louisiana Conservationist* to help defray production costs?

- | | |
|------------------|--------------------------|
| Strongly approve | ☐ |
| Approve | ☐ |
| Object | ☐ |
| Strongly object | ☐ |
| No opinion | ☐ |

13. How frequently do you read the outdoor column or section of your newspaper?

- | | |
|-------------|--------------------------|
| Daily | ☐ |
| Once a week | ☐ |
| Irregularly | ☐ |
| Never | ☐ |

14. To which of the following magazines do you subscribe?

- | | |
|--------------------------|--------------------------|
| Outdoor Life | ☐ |
| Field & Stream | ☐ |
| La. Game & Fish | ☐ |
| La. Fins & Feathers | ☐ |
| National Geographic | ☐ |
| National Wildlife | ☐ |
| Ranger Rick | ☐ |
| Sports Afield | ☐ |
| National Rifleman | ☐ |
| Audubon | ☐ |
| Louisiana Life | ☐ |
| American Hunter | ☐ |
| Southern Outdoors | ☐ |
| Others (outdoor related) | ☐ |

15. How often do you watch the wildlife programs on the Louisiana Public Broadcasting network (LPB)?

Frequently ☐ Sometimes ☐
Seldom ☐ Never ☐

16. Did you buy a Louisiana hunting license last year?

Yes - Basic ☐ Yes - Big Game ☐
Yes - Bowhunting ☐ Yes - Non-res. ☐
No ☐

17. Did you buy a Louisiana recreational fishing license last year?

Yes - Basic ☐ Yes - Saltwater ☐
Yes - Non-res. ☐ No ☐

18. Did you buy a Louisiana commercial fishing license last year?

Yes - Shrimp ☐ Yes - Fish net ☐
Yes - Oyster ☐ Yes - Crab ☐
Yes - Other ☐ No ☐

19. Did you buy a Louisiana trapping license or alligator tag last year?

Yes - Trapping license ☐
Yes - Alligator tag ☐
No ☐

20. Which of the following recreational activities did you participate in last year?

Deer hunting (still hunt) ☐
Deer hunting (with dogs) ☐
Deer hunting (bow) ☐
Deer hunting (black powder) ☐
Small game hunting ☐
Waterfowl hunting ☐
Turkey hunting ☐
Bass fishing ☐
Other freshwater fishing ☐
Saltwater fishing (inland) ☐
Saltwater fishing (offshore) ☐
Trapping ☐
Birdwatching ☐
Bird feeding ☐
Nature study ☐
Nature photography ☐
Target shooting ☐

Reloading ☐
Boating (powerboat) ☐
Boating (canoe) ☐
Boating (sailing) ☐
Hiking ☐
Backpacking ☐
Camping ☐
Wildlife observation ☐
Dog training ☐
Field trials ☐

21. Are you the owner of a powerboat or sailboat currently registered in Louisiana?

Power ☐ Sail ☐ No ☐

22. How long have you lived in Louisiana?

Less than 2 years ☐
2 to 9 years ☐
10 years or more ☐
Do not live in La. ☐

23. Which category most closely describes your total yearly household income before taxes?

Under \$10,000 ☐ \$10,001 - \$15,000 ☐
\$15,001 - \$25,000 ☐ \$25,001 - \$35,000 ☐
\$35,001 - \$50,000 ☐ Over \$50,000 ☐

24. Which category best describes the highest level of education you have completed?

Some high school ☐ High school grad ☐
Some college ☐ College grad ☐
Postgrad work ☐

25. Which category best describes your age?

Under 18 ☐ 18 - 24 ☐
25 - 34 ☐ 35 - 49 ☐
50 - 64 ☐ 65 or over ☐

26. What is your sex?

Male ☐ Female ☐

27. To what organizations do you belong?

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